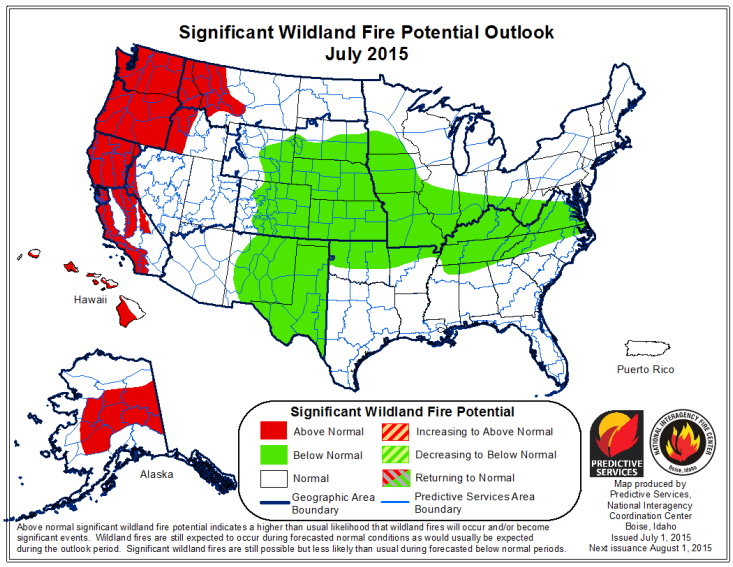
TETON INTERAGENCY FIRE

JULY 2015 WILDLAND FIRE OUTLOOK

July 1, 2015



Significant Wildland Fire Potential for July 2015 (issued July 1, 2015).
http://www.predictiveservices.nifc.gov/outlooks/outlooks.htm

SUMMARY

The winter, spring, and early summer of this water year were dominated by variable dry and wet months and warmer than normal temperatures, a reflection in part of weak El Niño/Southern Oscillation (ENSO) conditions. This pattern featured:

- Six months with below normal precipitation and three months above normal precipitation (at Moose WY weather station), with moisture tracking near normal year-to-date for July 1.
- The wet May was balanced by the dry June and we remain with Abnormally Dry conditions.
- Grasses and sagebrush in northern Sagebrush sampling sites (at Grand Teton NP) with a quicker response to the recent warm/dry spell, trending at 10% driest for July 1 when compared to 20+ years of sampling.

KEY POINTS for July

- FUELS > Live fuels continue to green up with seasonal growth and moisture trends. Live fuel moistures sampled on-site and projected moistures will remain below critical levels for early July.
- FUELS > Fine dead fuels (dead grass/thatch and twig-size) and heavy downed logs are drier than normal but are unlikely to reach critical levels for early and mid-July.
- WEATHER > Early June and May were wet but the last significant rain was in mid-June. High temperatures have been above normal for all of June. Temperatures are expected to remain in the normal range for July, with precipitation wetter than normal.
- SUMMARY > Fire danger has been increased to High and is likely to remain at this level or higher until monsoon moisture flow moves north from the Southwest. With monsoon flow we typically receive widely dispersed thunderstorms and the potential for dry and wet lightning.
- Regional outlooks indicate normal fire activity for mid-summer, with normal fire activity in mid- to late-season. The continuing weak El Niño conditions may limit high-pressure ridge formation (typically warm and dry) and support wet convection thunderstorms in late July-August, followed by normal or drier September conditions.
- During an average season, Bridger-Teton National Forest will have 67 fires for 3290 acres and Grand Teton National Park will have 12 fires for 789 acres.

CLIMATE AND FUELS OUTLOOK

(1) Year-to-Date Precipitation for Area Weather Stations

Area precipitation for the water year to date (October through June) continues to exhibit extremes in variability – from 204% of normal in May to 65% in June at the Moose weather station, which is representative for lower elevation sites in Grand Teton National Park and some North Zone sites. Six of the last nine months recorded below-normal precipitation and three above-normal, which equates to a near normal year-to-date precipitation of 99%. This alternating dry-wet-dry-wet pattern tracks similarly to the 2003-2004 water year (Table 1 and graph). Area-wide moisture tracking (Figure 1) captures the variety of moisture impacts for the entire Teton Interagency zone, with cumulative moisture ranging from above-normal to normal to below-normal.

Table 1 and Graph: Precipitation at Moose Weather Station (Grand Teton National Park).

		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	YTD total
Monthly Precipitation	1987-88	0.09	1.27	2.59	2.37	0.75	0.99	1.12	1.61	0.75	11.54
(inches)	1999-00	0.08	0.67	2.03	2.27	5.04	1.03	0.4	1.38	0.59	13.49
	2003-04	0.64	3.07	2.81	2.46	1.17	0.7	1.42	3.08	1.88	17.23
	2013-14	1.52	1.54	2.41	1.52	3.51	4.77	1.48	0.6	2.01	19.36
	Normal	*1.47*	*2.64*	*2.67*	*2.58*	*1.82*	*1.62*	*1.49*	*1.88*	*1.61*	*17.78*
	2014-15	**0.54**	**3.55**	**3.26**	**2.31**	**1.57**	**0.67**	**0.8**	**3.83**	**1.04**	**17.57**
Percent of NORMAL	1987-88	6%	60%	102%	92%	40%	63%	75%	84%	57%	65%
	1999-00	6%	32%	80%	88%	267%	66%	27%	72%	37%	76%
	2003-04	44%	116%	105%	95%	64%	43%	95%	164%	117%	97%
	2013-14	103%	58%	90%	59%	193%	294%	99%	32%	125%	109%
	2014-15	**37%**	**134%**	**122%**	**90%**	**86%**	**41%**	**54%**	**204%**	**65%**	**99%**

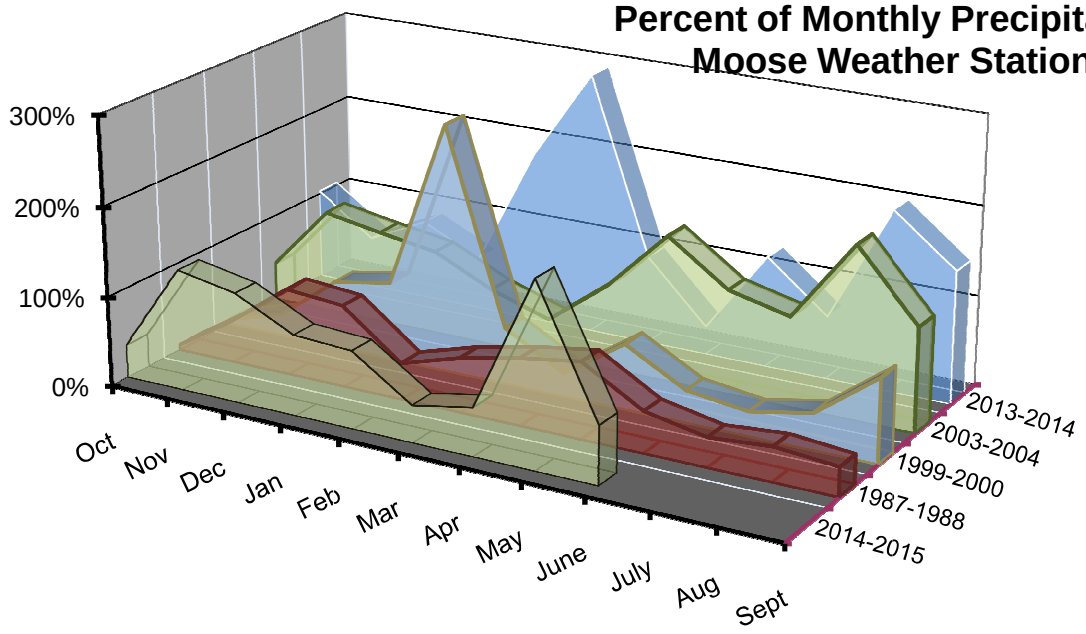
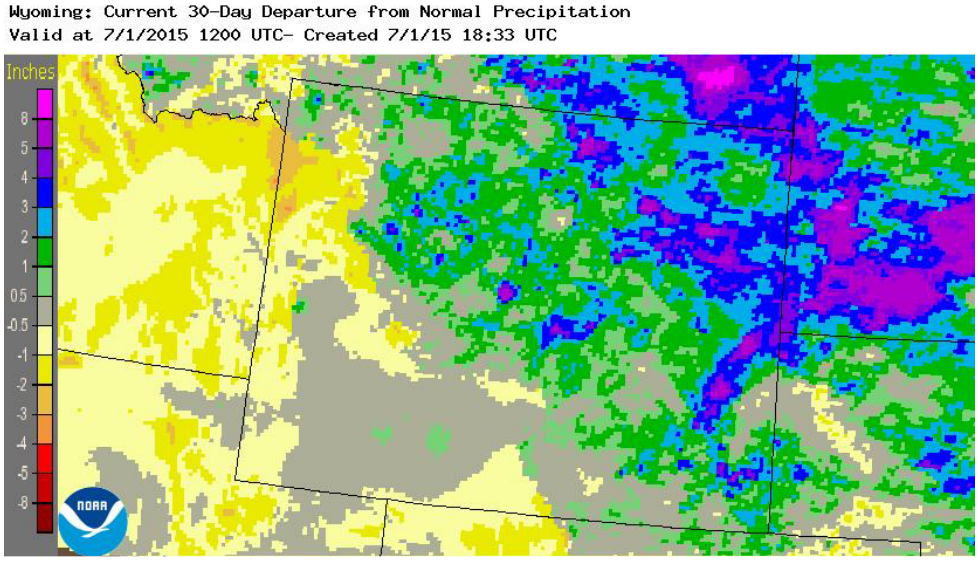


Figure 1. Wyoming, Current Precipitation – Departure from Normal -- for the past 30 days (ending July 1, 2015), Western Wyoming exhibits a range of normal to below-normal rainfall, with central and eastern Wyoming continuing to receive above-normal precipitation over the past month. http://water.weather.gov/precip/.



(2) Drought Monitor

The current drought map for the U.S. West shows 76% of the West in some stage of abnormally dry to drought conditions. In Wyoming, 28% of the state is abnormally dry, compared to 9% at this date last year.

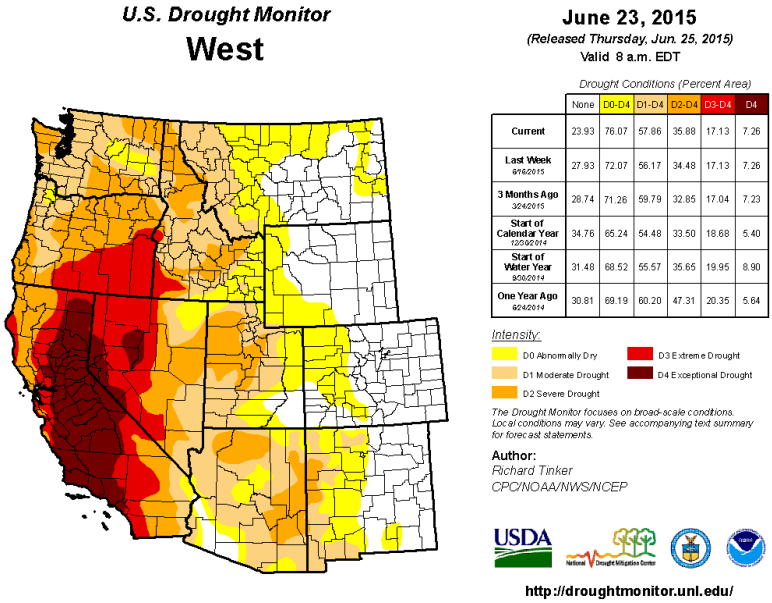


Figure 2a. U.S. Drought Monitor – West.
http://droughtmonitor.unl.edu/Home/RegionalDroughtMonitor.aspx?west

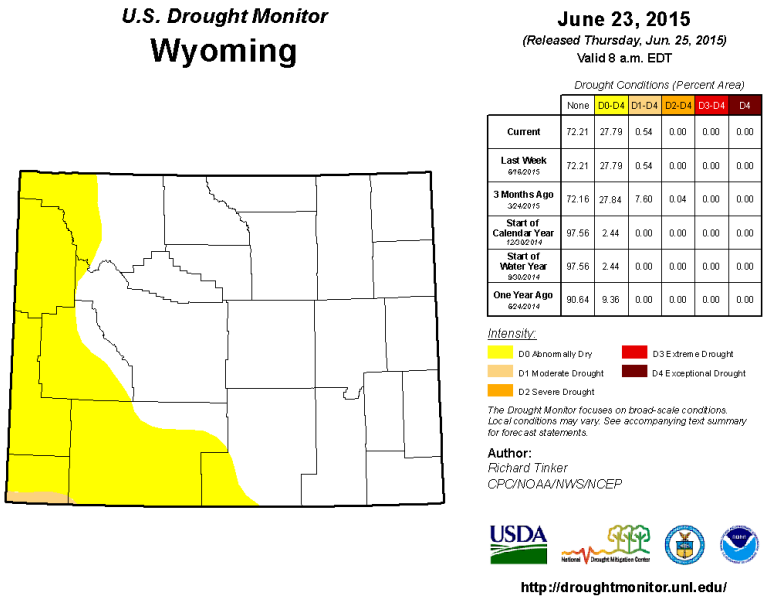
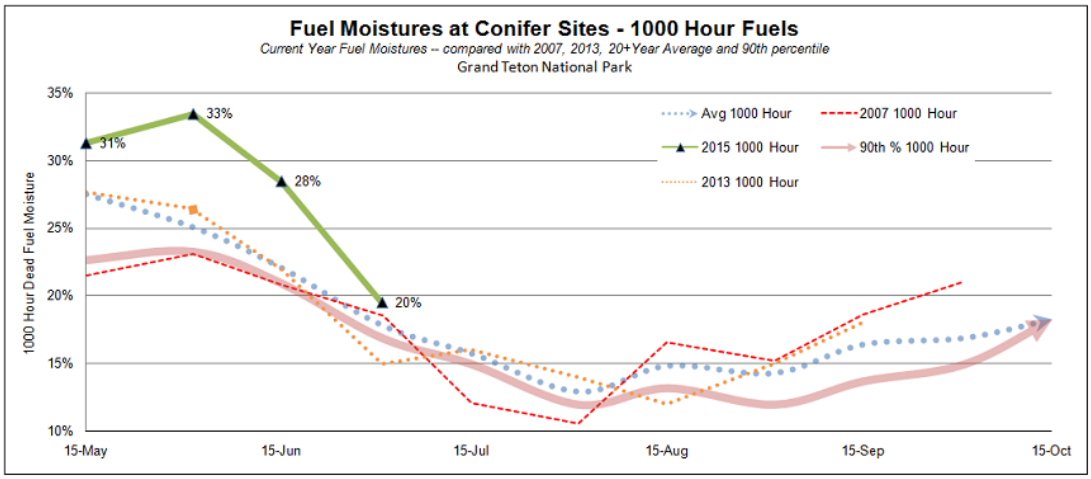


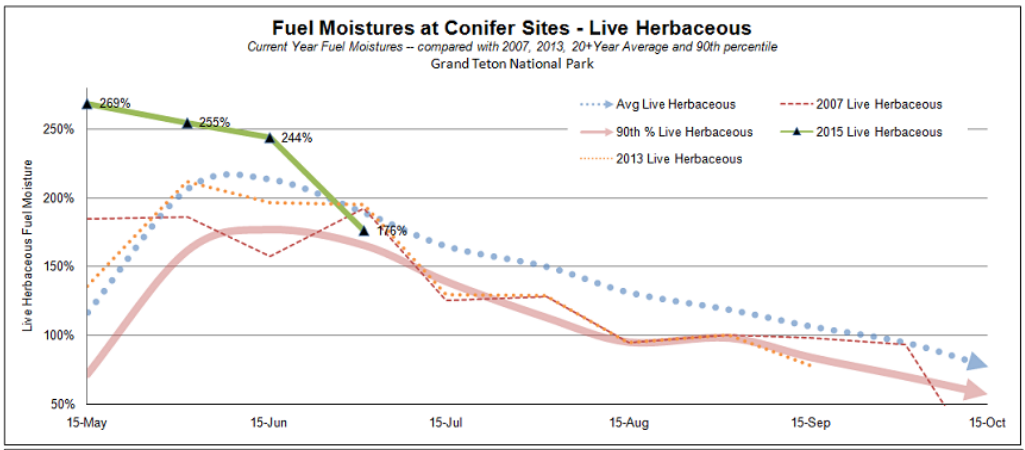
Figure 2b. U.S. Drought Monitor – Wyoming.
http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?WY

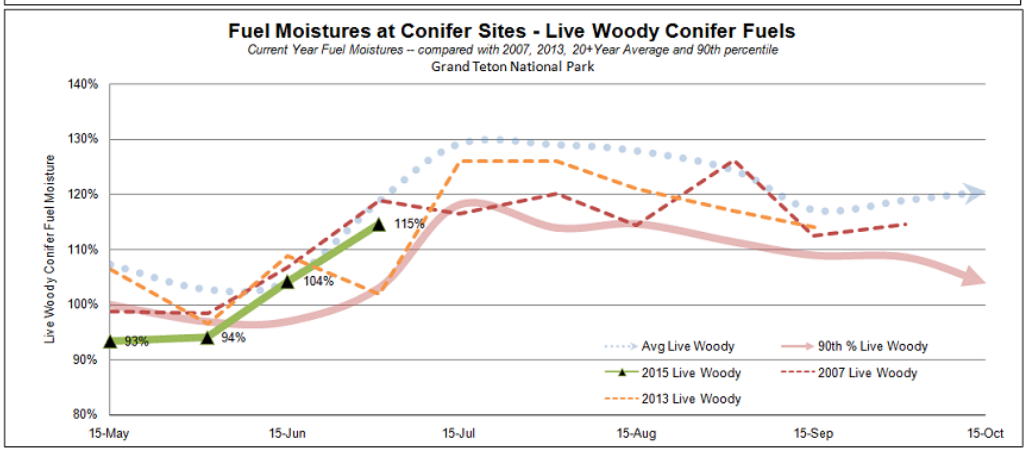
(3) Fuel Moisture

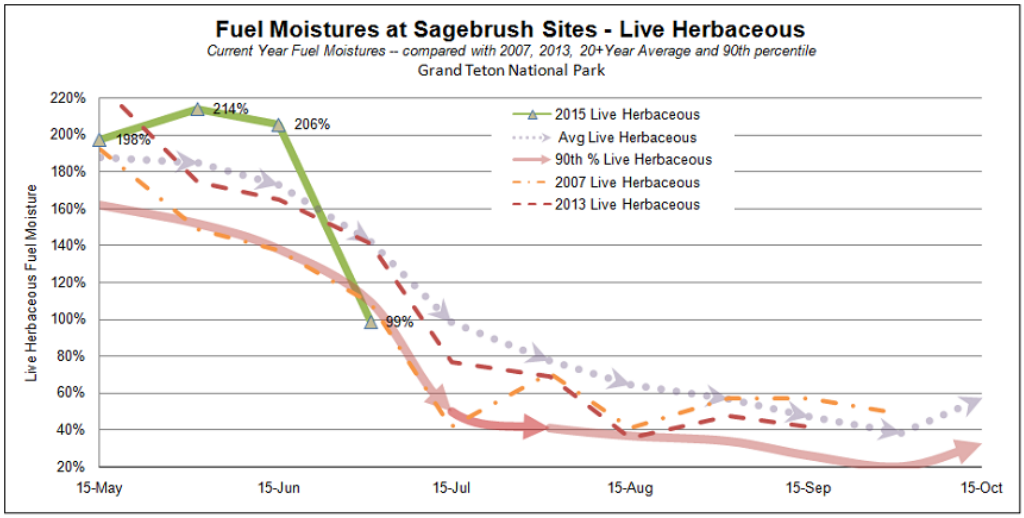
Fuel moisture sampling of live and dead fuels at long-term sampling sites in Grand Teton National Park indicate a wetter-than-normal green-up, with initial fuel moistures above normal, reflecting May precipitation at 200% of normal. With June's below normal precipitation (65% of normal at Moose), live fuel moistures returned to normal or drier than normal for July 1, and in sagebrush sampling sites both Live Herbaceous and Live Woody fuels are trending toward the 90th percentile (the driest 10 percent) for July 1 sampling.

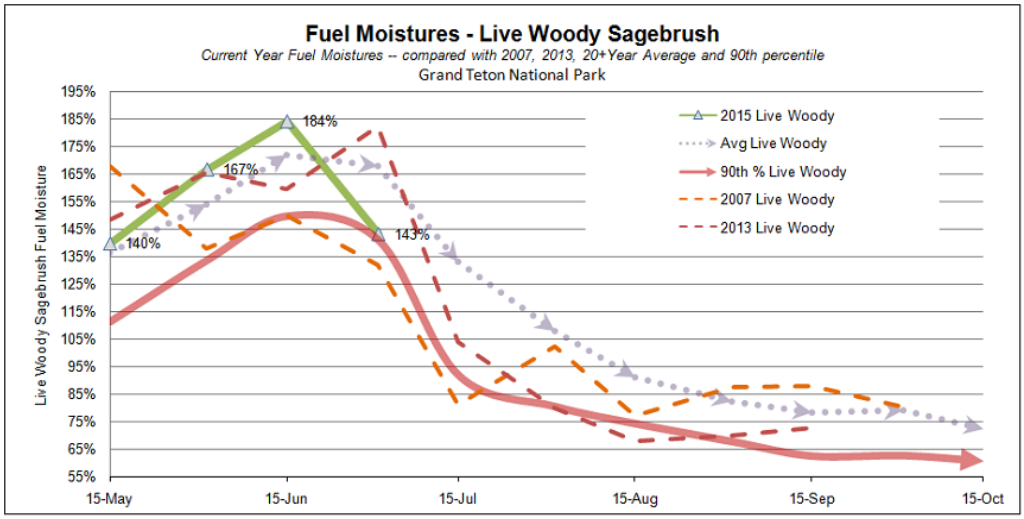
For additional tracking, see the National Fuel Moisture Database for Wyoming:
http://www.wfas.net/index.php/national-fuel-moisture-database-moisture-drought-103.




Fuel Moistures at Conifer Sites - Live Herbaceous
Current Year Fuel Moistures -- compared with 2007, 2013, 20+Year Average and 90th percentile
Grand Teton National Park
Live Herbaceous Fuel Moisture
269%
255%
244%
176%
Avg Live Herbaceous
2007 Live Herbaceous
90th % Live Herbaceous
2015 Live Herbaceous
2013 Live Herbaceous
250%
200%
150%
100%
50%
15-May
15-Jun
15-Jul
15-Aug
15-Sep
15-Oct


Fuel Moistures at Conifer Sites - Live Woody Conifer Fuels
Current Year Fuel Moistures -- compared with 2007, 2013, 20+Year Average and 90th percentile
Grand Teton National Park
Live Woody Conifer Fuel Moisture
93%
94%
104%
115%
Avg Live Woody
90th % Live Woody
2015 Live Woody
2007 Live Woody
2013 Live Woody
140%
130%
120%
110%
100%
90%
80%
15-May
15-Jun
15-Jul
15-Aug
15-Sep
15-Oct

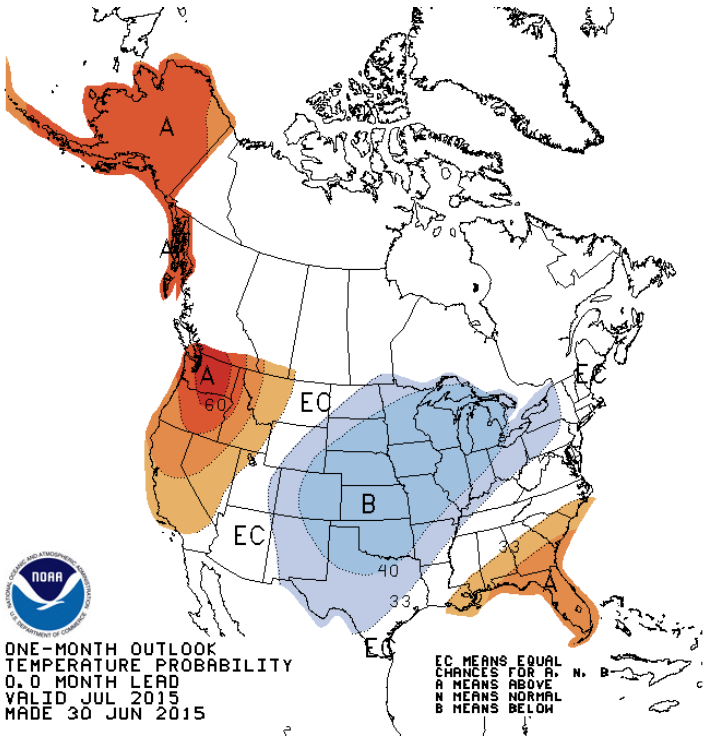

Fuel Moistures at Sagebrush Sites - Live Herbaceous
Current Year Fuel Moistures -- compared with 2007, 2013, 20+Year Average and 90th percentile
Grand Teton National Park
Live Herbaceous Fuel Moisture
198%
214%
206%
99%
2015 Live Herbaceous
Avg Live Herbaceous
90th % Live Herbaceous
2007 Live Herbaceous
2013 Live Herbaceous
220%
200%
180%
160%
140%
120%
100%
80%
60%
40%
20%
15-May
15-Jun
15-Jul
15-Aug
15-Sep
15-Oct

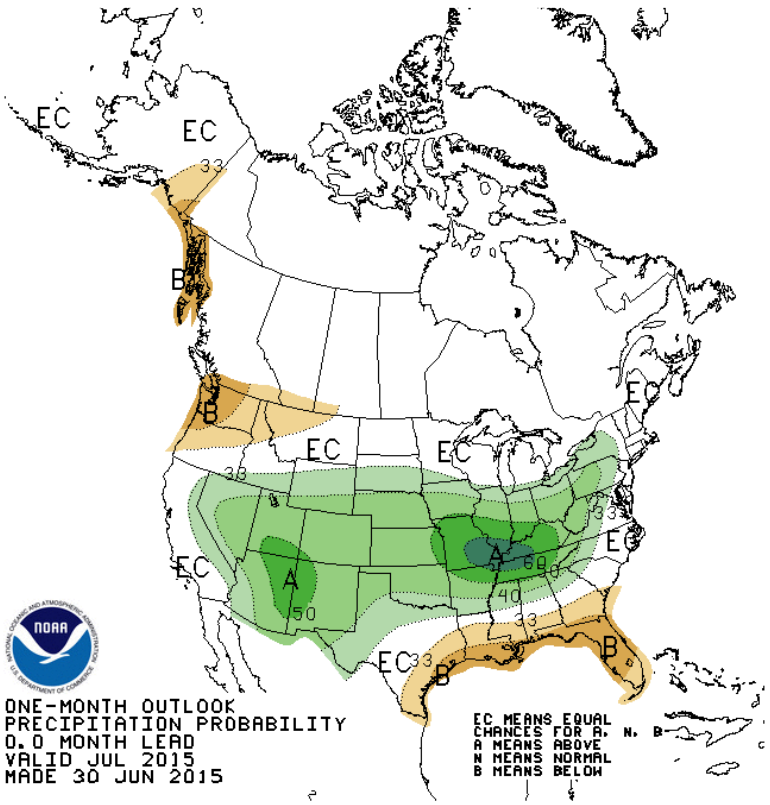


(6) Long-term Temperature and Precipitation Outlook

Outlooks from the Climate Prediction Center reflect expectations for a continuing weak El Niño conditions into the summer, with potential impacts on the US West. The 30-day outlook calls for normal probability for normal temperatures and wetter-than-normal precipitation. (*http://www.cpc.ncep.noaa.gov/products/predictions/90day/*).

Figures 6a and 6b: July 30-day Outlook (Temperature and Precipitation).





GEOGRAPHIC AREA OUTLOOKS

The Teton Area fire zone is within the Great Basin Geographic Area (new this year, via a merger of the Eastern and Western Great Basin geographic areas). Fire seasons in our zone also track with similar conditions in adjacent areas within the Rocky Mountain and Northern Rockies geographic areas, which converge within the Greater Yellowstone Area (GYA) and share common trends of fire activity. The season outlooks excerpted below support an outlook for normal fire activity in the Teton Interagency Dispatch zone and neighboring units, with potential for above-normal fire activity in western areas of the Great Basin geographic area. Strengthening El Nino conditions tend to mute the formation of dry and hot upper-level ridges and support a flow of wet summer convection from the northwest in July and August, with normal drying trend in September.

Excerpts of National and Regional Outlooks from "National Wildland Significant Fire Potential Outlook" (July 1, 2015, NIFC Predictive Services). http://www.nifc.gov/nicc/predictive/outlooks/monthly_seasonal_outlook.pdf.

National:

July

- Higher than usual temperatures; minimal summer precipitation; and already dry fuels will combine to continue above normal potential across most of the pacific coast states, as well as the northern Rocky Mountains and northern and western Great Basin.
- Fuels that were exposed to drying earlier than usual as well as hot and dry conditions throughout May and June have led to above normal potential throughout Alaska.
- Abundant spring and early summer precipitation and moist fuels will alleviate much of the fire concern for the Rocky Mountains, Southwest, and areas east of the Mississippi.

August

- Much of the above normal area from July will linger into August, with the exception of some of northern California. Above normal conditions will spread slightly westward to encompass more of the Great Basin.
- Most of the areas experiencing below normal potential will return to a more normal condition, with only some of the Central Rockies and Ohio Valley below normal.

September through October

- Almost all of the above normal potential return to normal through this period, leaving only far southern California as above normal.
- Below normal fall conditions will develop across inland portions of the southeast.

Great Basin: Above normal significant wildland fire potential will increase over western and northern areas of the Great Basin in July, expanding to northwest and northern Nevada in August, with a return to normal by September and October.

Average temperatures over the last 30 days were above normal across the Great Basin, especially over the northern portions of the Area. Precipitation over the last two weeks was minimal over the western portions of the Area, however was above normal over western Nevada and the Sierra and over parts of southeast Nevada and the southern half of Utah due to early June rains. Extreme to exceptional drought continues over the western half of Nevada and the Sierra and into far southwest Idaho, with moderate to severe drought over much of the rest of the Area.

The extended weather outlook still indicates an unsettled weather pattern in the Area through much of July, especially across Utah, and the eastern portion of Nevada, with less overall moisture in Idaho and far western and northwest Nevada and the Sierra. Temperatures will still likely remain above normal overall; however precipitation may also increase to above normal over the eastern half of the basin due to thunderstorms and the return of monsoon moisture. The potential for wetter conditions is expected to continue over southern and eastern areas.

Fuels have been rapidly drying out during the last two weeks in June. Lower elevation grasses are cured over much of Nevada and southwest and central Idaho. Sagebrush live fuel moisture is now decreasing to closer to normal, or even below normal in some areas. Pinyon-Juniper and timber fuel moisture remains well below normal in many areas of the Great Basin. Therefore the main concerns are in the Pinyon-Juniper and timber Pinyon-Juniper and timber areas where fuel moisture is low and fuel loading is higher, and in the lower elevation grasses of Idaho and northern and western Nevada and the Sierra Front that are already cured. Fire season should be well underway by the beginning of July, especially over western and northern areas, which will likely remain active into August.

If the warm and dry conditions persist into September, the fire season could extend through the month.

CURRENT FIRE ACTIVITY

Fire Activity: Teton Interagency Dispatch Center

Early season wildland fire activity is trending comparable to other years with wet springs, with slightly more acres than in recent years.

Table 2: Year-to-Date Fire Activity for Dispatch Center response zones, July 1 2015. (http://gacc.nifc.gov/gbcc/dispatch/wy-tdc/documents/predictive-services/intelligence/BTF_GRTE_Fire_Numbers_2015.xlsx)

Teton Interagency Fire Management Area Totals	Human Fires	Human Acres	Natural Fires	Natural Acres	RX Fires	RX Acres	Abandoned Non-escape Campfires
	7	37	1	0.1	0	0	28

For further information, contact: **Ron Steffens**
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Selected Sources

- Precipitation Tracking: http://water.weather.gov/precip/.
- Snow / Snotel Tracking: http://www.wcc.nrcs.usda.gov/snotel/Wyoming/wyoming.html
- Climate Prediction Center, Three-Month Outlooks: *http://www.cpc.ncep.noaa.gov/products/predictions/90day/*
- *Regional outlooks from "National Wildland Significant Fire Potential Outlook" (June 1, 2015, NIFC Predictive Services):* http://www.nifc.gov/nicc/predictive/outlooks/monthly_seasonal_outlook.pdf.
- Great Basin Predictive Services/Outlooks: http://gacc.nifc.gov/gbcc/outlooks.php.
- Teton Interagency Fire and Dispatch Center: http://www.tetonfires.com.